Cumulative and divisive reference

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OJ591

1 Cumulative reference

(1) $\forall x[P(x) \rightarrow \forall y[P(y) \rightarrow P(x \oplus y)]]$
A property P is cumulative iff whenever it holds of two things, it also holds of their sum.

2 Divisive reference

(2) $\forall x[P(x) \rightarrow \forall y[y \sqsubset x \rightarrow P(y)]]$
A property P is divisive iff whenever it holds of something, it also holds of each of its proper parts.

3 Symbols

P – predicate variable $\approx$ 'some property'

x, y – individual variable $\approx$ 'some entity'

$\forall$ – universal quantifier $\approx$ 'for all'

$\rightarrow$ – material implication $\approx$ 'if. . . then'

$\oplus$ – sum operation $\approx$ 'sum of entities'

$\sqsubset$ – parthood relation $\approx$ 'part of an entity'